

COMPLIANCE PLAN CAPITAL ITEMS

REACTOR VALVE LIMIT SWITCH REPLACEMENT

ABERDEEN CHEMICAL PLANT

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COMPLIANCE PLAN CAPITAL ITEMSREACTOR VALVE LIMIT SWITCH REPLACEMENTABERDEEN CHEMICAL PLANTI. Purpose and Process Description

The purpose of this design is to provide the valves on the reactors with accurate indication in the control room of the valve position. The existing limit switches do not provide this accuracy, since they are operated by the position of the actuator and not the actual valve stem. This type of operation does not take into account the possibility of shearing between the valve stem and actuator, which has occurred here in the plant. This poses a potentially hazardous situation for a VCM release.

This design will provide each of the designated valves on the reactors with a new limit switch that operates on the position of the valve stem. These new limit switches will provide accurate indication in the control room and eliminate the hazard of a valve being open when it's actuator position is showing closed.

A total of 70 valves will be equipped with this new type of limit switch. These limit switches will be mounted on the bracket between the valve and the actuator. Drawings of several different types of valves with the new limit switches are attached. Table I lists the valve location and manufacturer. Table II lists the different types of valves, quantity of each and actuator type.

TABLE I

<u>Reactor</u>	<u>Valve Location</u>	<u>Size</u>	<u>Manufacturer</u>
745			
+	Chem Wash Rtrn.	6"	Jamesbury (Ball)
	Hot H ₂ O Charge	6"	TuFlne (Plug) 150
700	Sewer	6"	Jamesbury (Ball)
	Dump	6"	Jamesbury (Ball)
	Evacuation	8"	TuFlne (Plug) 150
	Recovery	6"	TuFlne (Plug) 150
	Vent	4"	TuFlne (Plug) 300
600			
+	Chem Wash Rtrn.	6"	KTM E0106 (Ball)
500	Hot H ₂ O Charge	6"	TuFlne (Plug) 150
	Sewer	6"	TuFlne (Plug) 150
	Dump	6"	WKM 6FB112 (Ball)
	Evacuation	6"	TuFlne (Plug) 150
	Recovery	6"	TuFlne (Plug) 150
600	Vent	3"	WKM (Ball) 3RB100
500	Vent	3"	TuFlne (Plug) 300
400	Chem Wash Rtrn.	6"	WKM (Ball) 6FB123 Module 310C
	Hot H ₂ O Charge	6"	TuFlne (Plug) 150
	Sewer	6"	Durco (Plug) 6411
	Dump	6"	WKM (Ball) 310
	Evacuation	6"	TuFlne (Plug) 150
	Recovery	6"	TuFlne (Plug) 150
	Vent	3"	WKM (Ball) 3RB100 310C
300	Chem Wash Return	6"	KTM (Ball) E0106
	Hot H ₂ O Charge	6"	TuFlne (Plug) 150
	Sewer	6"	TuFlne (Plug) 150
	Dump	6"	WKM (Ball) 6FB112 310 B

<u>Reactor</u>	<u>Valve Location</u>	<u>Size</u>	<u>Manufacturer</u>
	Evacuation	6"	TuFlne (Plug) 150
	Recovery	6"	TuFlne (Plug) 150
	Vent	3"	TuFlne (Plug) 300
744			
743			
742	Chem Wash Rtrn.	6"	WKM (Ball) 6F-B130 310B
+741	Hot H ₂ O Charge	6"	WKM (Ball) 6X4-B102
	Sewer	6"	WKM (Ball) 6X4-B102
	Dump	6"	WKM (Ball) 6F-B112 310B
	Evacuation	6"	TuFilne (Plug) 150
	Recovery	6"	TuFlne (Plug) 150
	Vent	3"	WKM (Ball) 3KB150

COMPLIANCE PLAN CAPITAL ITEMSREACTOR VALVE LIMIT SWITCH REPLACEMENTABERDEEN CHEMICAL PLANTIII. Instrument Specification

<u>Item</u>	<u>Description</u>
PLS-101 through 170	Promimity Limit Switches